

II. Amendments to the Claims

Please amend claims 1-6, 8-12, 15 and 38-40 as follows. Please cancel claim 7.

Please add new claims 41 and 42.

1. (currently amended) An isolated antibody comprising an amino acid sequence which is at least 95% identical to an amino acid sequence selected from the group consisting of SEQ ID NOs:65, 66, and 67, wherein the antibody selectively binds to ~~[[an]]~~ the extracellular domain of a human or a mouse IL-21R.

2. (currently amended) An isolated antibody encoded by a nucleotide sequence which is at least 95% identical to a nucleotide sequence selected from the group consisting of SEQ ID NOs:74, 75, and 76, wherein the antibody selectively binds to ~~[[an]]~~ the extracellular domain of a human or a mouse IL-21R.

3. (currently amended) An isolated antibody comprising a V_H domain having an amino acid sequence which is at least 95% identical to the amino acid sequence of SEQ ID NO:65, and a V_L domain having an amino acid sequence which is at least 95% identical to the amino acid sequence of SEQ ID NO:66, wherein the antibody selectively binds to ~~[[an]]~~ the extracellular domain of a human or a mouse IL-21R.

4. (currently amended) An isolated antibody comprising a V_H domain which ~~comprises~~ comprises:

_____ (a) the CDR sequences set forth in SEQ ID NOs:68, 69, and ~~70-71~~ 70, or

_____ (b) conservative amino acid substitutions thereof, wherein the V_H domain comprises CDR sequences with one conservative amino acid substitution of SEQ ID NO:68, two or less conservative amino acid substitutions of SEQ ID NO:69, and/or one conservative amino acid substitution of SEQ ID NO:70,

wherein the antibody selectively binds ~~[[an]]~~ the extracellular domain of a human or a mouse IL-21R.

5. (currently amended) An isolated antibody comprising a V_L domain which ~~emprises~~ comprises:

_____ (a) the CDR sequences set forth in SEQ ID NOs:71, 72, and ~~73 or~~ 73, or

_____ (b) conservative amino acid substitutions thereof, wherein the V_L domain comprises CDR sequences with two or less conservative amino acid substitutions of SEQ ID NO:71, one conservative amino acid substitution of SEQ ID NO:72, and/or two or less conservative amino acid substitutions of SEQ ID NO:73,

wherein the antibody selectively binds to ~~[[an]]~~ the extracellular domain of a human or a mouse IL-21R.

6. (currently amended) An isolated antibody that competes with an antibody comprising an amino acid sequence selected from the group consisting of SEQ ID NOs:65, 66, and 67 for binding to ~~[[an]]~~ the extracellular domain of a human or a mouse IL-21R.

7. (canceled)

8. (currently amended) The antibody of claim 1, 2, 3, 4, 5, ~~6 or 7~~, or 6, wherein the antibody selectively binds to an amino acid sequence that is at least 95% identical to a sequence comprising at least 100 contiguous amino acids set forth in SEQ ID NO:43.

9. (currently amended) The antibody of claim 1, 2, 3, 4, 5, ~~6 or 7~~, or 6, wherein the antibody selectively binds the extracellular domain of the polypeptide set forth in SEQ ID NO:43.

10. (currently amended) The antibody of claim 1, 2, 3, 4, 5, ~~6 or 7~~, or 6, wherein the antibody inhibits the binding of IL-21 to an extracellular domain of a human or a mouse IL-21R.

11. (currently amended) The antibody of claim 1, 2, 3, 4, 5, ~~6 or 7~~, or 6, wherein the antibody is human.

12. (currently amended) The antibody of claim 1, 2, 3, 4, 5, ~~6 or 7~~, or 6, wherein the antibody is an IgG₁ antibody.

13. (original) The antibody of claim 12, wherein the antibody is IgG_{1λ} or IgG_{1κ}.

14. (withdrawn) An isolated antibody expressed by a host cell having ATCC Deposit Designation No. PTA-5030 or PTA-5031.

15. (currently amended) A pharmaceutical composition comprising the antibody of claim 1, 2, 3, 4, 5, ~~6 or 7~~, or 6, and a pharmaceutical excipient.

16. (withdrawn) An isolated nucleic acid encoding the antibody of claim 1, 2, 3, 4, 5, 6 or 7.

17. (withdrawn) An expression vector comprising the nucleic acid of claim 16.

18. (withdrawn) A host cell transformed with the vector of claim 17.

19. (withdrawn) The host cell of claim 18, wherein the host cell is a bacteria, mammalian cell, yeast cell, plant cell, or an insect cell.

20. (withdrawn) A host cell having ATCC Deposit Designation No. PTA-5030 or PTA-5031.

21. (withdrawn) A method of producing an antibody that binds to an IL-21 receptor, comprising culturing the host cell of claim 20 under conditions that allow expression of the antibody, and isolating the antibody from the cell culture.

22. (withdrawn) A method of generating an antibody or antigen-binding fragment that selectively binds an IL-21 receptor comprising:

(a) providing a repertoire of nucleic acids encoding a variable domain that either includes a CDR 1, 2 or 3 to be replaced or lacks a CDR1, 2 or 3 encoding region;

(b) combining the repertoire with a donor nucleic acid encoding an amino acid sequence substantially as set forth in SEQ ID NO:4, 5, 6, 7, 8, 9, 22, 23, 24, 25, 26, 27, 50, 51, 52, 53, 54, 55, 68, 69, 70, 71, 72, 73, 86, 87, 88, 89, 90, 91, 104, 105, 106, 107, 108, 109, 122, 123, 124, 125, 126, 127, 140, 141, 142, 143, 144 or 145, such that the donor nucleic acid is inserted into the CDR1, 2 or 3 region in the repertoire, so as to provide a product repertoire of nucleic acids encoding a variable domain;

(c) expressing the nucleic acids of said product repertoire;

(d) selecting an antigen-binding fragment specific for the IL-21 receptor; and

(e) recovering the antigen-binding fragment or nucleic acid encoding the antigen-binding fragment.

23. (cancelled)

24. (withdrawn) The method of claim 22, further comprising the step of germlining.

25. (withdrawn) A method of regulating an immune response comprising contacting a cell with the antibody of claim 1, 2, 3, 4, 5, 6, 7 or 23, thereby regulating the immune response.

26. (withdrawn) The method of claim 25, wherein the cell is a leukocyte or a synovial cell.

27. (withdrawn) The method of claim 26, wherein the leukocyte is a T cell, a B cell, a NK cell, or a macrophage.

28. (withdrawn) The method of claim 25, wherein the immune response comprises cell proliferation, cytolytic activity, cytokine secretion, or chemokine secretion.

29. (withdrawn) A method of treating or preventing an immune cell-associated disorder, in a subject, comprising, administering to the subject the antibody of claim 1, 2, 3, 4, 5, 6, 7 or 23, in an amount sufficient to inhibit or reduce immune cell activity in the subject, thereby treating or preventing the disorder.

30. (withdrawn) The method of claim 29, wherein the immune cell-associated disorder is chosen from multiple sclerosis, rheumatoid arthritis, systemic lupus erythematosus, juvenile rheumatoid arthritis, osteoarthritis, psoriatic arthritis, ankylosing spondylitis, transplant rejection, inflammatory bowel disease, psoriasis and Crohn's disease.

31. (withdrawn) The method of claim 30, wherein the immune cell-associated disorder is chosen from rheumatoid arthritis, inflammatory bowel disease, Crohn's disease and psoriasis.

32. (withdrawn) The method of claim 29, further comprising administering to the subject another therapeutic agent chosen from a cytokine inhibitor, a growth factor inhibitor, an immunosuppressant, an anti-inflammatory agent, a metabolic inhibitor, an enzyme inhibitor, a cytotoxic agent, and a cytostatic agent.

33. (withdrawn) The method of claim 32, wherein the therapeutic agent is chosen from a TNF antagonist, an IL-12 antagonist, an IL-15 antagonist, an IL-17 antagonist, an IL-18 antagonist, an IL-22 antagonist, a T cell depleting agent, a B cell depleting agent, methotrexate, leflunomide, rapamycin, or an analog thereof, a Cox-2 inhibitor, a cPLA2 inhibitor, an NSAID, and a p38 inhibitor.

34. (withdrawn) A method of treating or preventing a hyperproliferative disorder, in a subject, comprising administering to the subject the antibody of claim 1, 2, 3, 4, 5, 6, 7 or 23, in an amount sufficient to inhibit or reduce hyperproliferation of IL-21- and/or IL-21 receptor-responsive cells in the subject, and allowing the antibody to treat or prevent the disorder.

35. (withdrawn) The method of claim 34, wherein the subject is a mammal.

36. (withdrawn) The method of claim 34, wherein the subject is a human.

37. (withdrawn) The method of claims 29, 30 or 33, wherein the antibody is administered in a range chosen from 1 µg/kg to 20 mg/kg, 1 µg/kg to 10 mg/kg, 1 µg/kg to 1 mg/kg, 10 µg/kg to 1 mg/kg, 10 µg/kg to 100 µg/kg, 100 µg to 1 mg/kg, and 500 µg/kg to 1 mg/kg.

38. (currently amended) A diagnostic kit comprising the antibody of claim 1, 2, 3, 4, 5, ~~6 or 7~~, or 6, and a reagent for detecting the ~~antibody-antibody~~, wherein the antibody and the reagent are in separate containers.

39. (currently amended) An antibody or an antigen-binding fragment that binds to an extracellular domain of a human or a mouse IL-21R, produced by a method comprising:

(a) providing a repertoire of nucleic acids encoding a ~~variable~~ V_H domain that either includes ~~[[a]] CDR 1, 2~~ [[or]] and 3 to be replaced or lacks ~~[[a]] CDR 1, 2~~ [[or]] and 3 encoding ~~region~~, regions;

(b) combining the repertoire with ~~[[a]] donor nucleic acid~~ acids encoding ~~[[an]] amino acid sequence~~ sequences substantially as set forth in SEQ ID NOs:68, 69, ~~70, 71, 72, or 73, and 70,~~ such that the donor nucleic ~~acid is~~ acids are inserted into the CDR 1, 2 ~~[[or]] and 3~~ region in the repertoire, so as to provide a product repertoire of nucleic acids encoding a ~~variable~~ V_H domain;

(c) expressing the nucleic acids of the product repertoire;

(d) selecting an antibody or an antigen-binding fragment expressed from the product repertoire of nucleic acids, wherein the antibody or antigen-binding fragment is specific for [[an]] the extracellular domain of a human or a mouse IL-21R.

40. (currently amended) An antibody or an antigen-binding fragment that binds to an extracellular domain of a human or a mouse IL-21R, produced by a method comprising:

(a) providing a repertoire of nucleic acids encoding a variable domain that either includes a V_H ~~or~~ V_L to be replaced, or lacks a V_H ~~or~~ V_L encoding region;

(b) combining the repertoire with a donor nucleic acid encoding an amino acid sequence substantially as set forth in SEQ ID NOs:65 ~~or~~ 66, such that the donor nucleic acid is inserted into the V_H ~~or~~ V_L region in the repertoire, so as to provide a product repertoire of nucleic acids encoding a variable domain;

(c) expressing the nucleic acids of the product repertoire; and

(d) selecting an antibody or an antigen-binding fragment expressed from the product repertoire of nucleic acids, wherein the antibody or antigen-binding fragment is specific for [[an]] the extracellular domain of a human or a mouse IL-21R.

41. (new) An antibody or an antigen-binding fragment that binds to an extracellular domain of a human or a mouse IL-21R, produced by a method comprising:

(a) providing a repertoire of nucleic acids encoding a V_L domain that either includes CDR 1, 2 and 3 to be replaced or lacks CDR 1, 2 and 3 encoding regions;

(b) combining the repertoire with donor nucleic acids encoding amino acid sequences substantially as set forth in SEQ ID NOs:71, 72, and 73, such that the donor nucleic acids are inserted into the CDR 1, 2 and 3 region in the repertoire, so as to provide a product repertoire of nucleic acids encoding a V_L domain;

(c) expressing the nucleic acids of the product repertoire;

(d) selecting an antibody or an antigen-binding fragment expressed from the product repertoire of nucleic acids, wherein the antibody or antigen-binding fragment is specific for the extracellular domain of a human or a mouse IL-21R.

42 (new) An antibody or an antigen-binding fragment that binds to an extracellular domain of a human or a mouse IL-21R, produced by a method comprising:

(a) providing a repertoire of nucleic acids encoding a variable domain that either includes a or V_L to be replaced, or lacks a or V_L encoding region;

(b) combining the repertoire with a donor nucleic acid encoding an amino acid sequence substantially as set forth in SEQ ID NOs:66, such that the donor nucleic acid is inserted into the or V_L region in the repertoire, so as to provide a product repertoire of nucleic acids encoding a variable domain;

(c) expressing the nucleic acids of the product repertoire; and

(d) selecting an antibody or an antigen-binding fragment expressed from the product repertoire of nucleic acids, wherein the antibody or antigen-binding fragment is specific for the extracellular domain of a human or a mouse IL-21R.